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SOME CHARACTERISTICS OF JUNIOR COLLEGE STUDENTS.

BY- FANOS, ROBERT J.

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DESCRIPTIVE DATA WERE COLLECTED BY QUESTIONNAIRE IN FALL 1965 FROM 6,860 ENTERING FRESHMEN AT A SAMPLE OF ACCREDITED 2-YEAR COLLEGES. DATA ARE PRESENTED TO SHOW SEX, AGE, PARENTAL INCOME AND EDUCATIONAL BACKGROUND, RACIAL BACKGROUND, RELIGIOUS BACKGROUND, TYPE OF HIGH SCHOOL, HIGH SCHOOL GRADES, EDUCATIONAL ASPIRATIONS, MAJOR FIELD, SPECIAL ACHIEVEMENTS, AND SELF-RATINGS ON SELECTED PERSONALITY TRAITS. FOR SOME ITEMS, DATA ARE ALSO PRESENTED FOR 4-YEAR COLLEGES AND FOR UNIVERSITIES. (WD)

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SOME CHARACTERISTICS OF
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ROBERT J. PANOS

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Some Characteristics of Junior College Students

Robert J. Panos

American Council on Education

The purpose of this paper is to present some descriptive data collected in the fall of 1965 from 6,860 entering freshmen students at a sample of accredited two-year colleges. These data were collected by the American Council on Education as part of a pilot study designed to evaluate the feasibility of collecting such data on a continuing large scale basis from a representative sample of all institutions of higher education (Astin and Panos, 1966).¹

The representativeness of the sample of junior colleges included in the pilot study was evaluated in terms of six characteristics of junior colleges defined in a recent study by Richards, Rand, and Rand (1965): Cultural Affluence, Technological Specialization, Size, Age, Transfer Emphasis, and Business Orientation. The sample of junior colleges, when compared with the population of accredited junior colleges (Gleazer, 1963), was found to be of significantly greater size. The sample colleges do not differ significantly from the population with regard to the five other categories.

It should be noted, however, that because of the relatively small size of the sample of junior colleges, the data presented here are not completely representative of the entire spectrum of all accredited junior colleges. Furthermore, sufficient information about junior colleges is not yet available to enable one to define relatively independent variables which can be used to stratify junior colleges on those dimensions that control for variations within and among institutions. Nevertheless, the data presented here are adequate to document certain characteristics of entering junior college freshmen students, to demonstrate the variation among junior colleges with regard to a variety of student

¹The pilot study sample included 15 universities, 39 four-year colleges, and 7 junior colleges.

characteristics, and, perhaps, to make a few qualified generalizations.

Background Characteristics

Fifty-five percent of the students were men; 45 percent were women. About two-thirds of the males indicated their age (as of December 31, 1965) as eighteen or younger, and 78.7 percent of the women were eighteen or younger. A comparison of age distributions among junior college students and four-year college students is shown below.

<u>Percentage of Students</u>	<u>Junior Colleges</u> (N = 6,860)		<u>Four-Year Institutions</u> (N = 35,200)	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
18 or younger	64.6	78.7	82.6	90.6
19 to 21	28.8	15.6	16.0	8.8
22 or older	6.6	5.8	1.4	0.7

The relatively larger percentages of older students of both sexes accommodated by junior colleges reflects one aspect of the unique opportunity for continuing higher education provided by two-year colleges.

Almost five percent of the total sample reported an estimated annual family income (all sources before taxes) of less than \$4,000. More than twice as many students reported family incomes of over \$20,000. The modal (28.3 percent) estimated annual family income was in the interval \$10,000-\$14,999. Of the total sample, 44.9 percent reported that their fathers had received at least some college training, and 35.5 percent indicated that their mothers had continued their formal education beyond the high school level. The distribution of responses with regard to parental income and parents' educational level is shown in Table 1.

(Table 1 here)

The data displayed in Table 1 document the diverse nature of educational opportunity provided by junior colleges. As would be expected,

Table 1

Parental Income and Parent's Educational Level of Junior College Freshmen
(Percentages)

<u>Item Description</u>	<u>All Colleges</u>		<u>Range Among Colleges</u>		
	<u>Male</u>	<u>Female</u>	<u>High</u>	<u>Low</u>	<u>Range</u>
Estimated Parental Income					
Less than \$4,000	4.9	4.6	7.7	0.5	7.2
\$4,000 - \$5,999	12.0	12.4	19.3	0.5	18.8
\$6,000 - \$7,999	17.7	15.1	23.4	0.5	22.9
\$8,000 - \$9,999	17.5	14.2	18.0	1.0	17.0
\$10,000 - \$14,999	28.3	28.2	32.7	6.3	26.4
\$15,000 - \$19,999	9.9	10.5	14.5	6.9	7.6
\$20,000 - \$24,999	3.8	5.9	16.9	2.7	14.2
\$25,000 - \$29,999	2.0	3.3	16.4	1.0	15.4
\$30,000 or more	3.9	5.8	44.4	1.6	42.8
Fathers Education					
Grammar School or less	8.7	8.1	10.3	0.8	9.5
Some High School	19.0	16.5	20.5	1.6	18.9
High School graduate	30.1	27.1	32.1	6.8	25.3
Some College	22.5	22.7	26.6	16.1	10.5
College degree	14.3	17.8	40.7	12.2	28.5
Postgraduate degree	5.3	7.7	33.8	3.9	29.9
Mothers Education					
Grammar School or less	5.7	5.2	7.5	0.0	7.5
Some High School	17.2	15.1	19.9	0.8	19.1
High School graduate	45.5	39.4	44.4	18.9	25.5
Some College	19.8	23.9	29.4	17.7	11.7
College degree	10.1	14.3	43.5	8.8	34.7
Postgraduate degree	1.7	2.1	7.2	1.2	6.0

all economic levels are represented and most are from the middle income groups. Nevertheless, students with less advantaged socioeconomic backgrounds are not denied the opportunity to pursue higher education. The variation among individual junior colleges is comparable to the diversity of similar college student characteristics which has been consistently documented in studies of four-year institutions (Panos and Astin, 1966).

Almost 60 percent of the students indicated Protestant religious family backgrounds and 26.5 percent reported they were reared in the Roman Catholic religion. Although less than four percent indicated "none" for their formal religious background, over ten percent said they presently have no religious preference.

Almost 93 percent indicated their racial background as Caucasian. Less than one percent indicated Negro, 0.8 percent American Indian, 0.7 percent Oriental, and 5.1 percent "other". The fact that only 2.8 percent of the students entering four-year institutions indicated "other" for racial background suggests that junior colleges may be providing greater opportunity for higher education to the nonwhite segment of the American population. The data on race and religious background are summarized below.

<u>Percentage of Junior College Freshmen</u>	<u>Male</u>	<u>Female</u>
Racial Background		
Caucasian	92.0	93.2
Negro	0.8	0.9
American Indian	1.0	0.6
Oriental	0.8	0.6
Other	5.4	4.7
Religious Background		
Protestant	55.8	64.1
Roman Catholic	28.6	24.0
Jewish	1.7	2.4
Other	9.6	6.6
None	4.2	2.9
Present Religious Preference		
Protestant	47.4	58.6
Roman Catholic	27.6	24.5
Jewish	1.7	2.1
Other	10.4	7.9
None	13.0	6.9

Eighty-nine percent of the students graduated from public secondary schools. Six percent were graduated from Roman Catholic high schools, and 4.6 percent came from other privately controlled secondary schools. Thirty-eight percent reported they had applied for admission to at least one other college. Of these, 44.3 percent indicated they had received more than one acceptance. Only 26.2 percent of the students said they would have preferred to attend some other institution.

The modal (26.4 percent) reported average grade in secondary school was "C". Slightly more than 24 percent had a "C+" average. The median average grade attained in secondary school for students entering four-year institutions is in the "B" to "B+" range. This difference in grade averages is not surprising in view of the fact that junior colleges are relatively less selective with regard to their entering students' prior academic achievements. Table 2 displays the distribution of grades for junior college students and four-year college students by age.

(Table 2 here)

The data in Table 2 clearly show the general tendency among four-year institutions to accommodate only those students seeking higher education who have achieved academically in high school. Clearly, the two-year college provides an educational opportunity for a great number of students who would probably not be acceptable to most four-year institutions. This opportunity is particularly evident among the younger students, where the proportion of those with averages of less than "C+" entering junior colleges is about five times greater than the proportion entering senior colleges. Nevertheless, it should be noted that there is a wide range among four-year institutions with regard to student academic achievements, and that this is

Table 2

Average Grade in Secondary School by Age
(Percentages)

Age	Average Grade	<u>Junior Colleges</u>		<u>Four-year Institutions</u>	
		Male	Female	Male	Female
18 or Younger	A or A+	0.8	1.0	7.8	11.7
	A-	0.9	2.6	12.2	17.8
	B+	4.2	10.8	18.5	24.7
	B	11.7	23.2	21.5	22.4
	B-	21.6	23.0	18.0	12.8
	C+	25.7	22.1	14.3	7.5
	C	31.8	16.8	7.5	3.1
	D	3.3	0.5	0.3	0.1
19 to 21	A or A+	0.7	1.9	5.1	8.3
	A-	1.2	3.3	7.5	15.6
	B+	5.6	11.6	13.6	21.3
	B	10.5	21.4	19.1	23.0
	B-	15.6	17.7	18.3	13.2
	C+	24.2	24.3	19.8	11.3
	C	37.8	18.5	15.5	6.8
	D	4.3	1.3	1.1	0.4
22 or Older	A or A+	1.2	2.8	2.2	5.9
	A-	2.0	9.0	3.9	16.8
	B+	2.4	20.2	11.8	19.8
	B	16.5	19.7	16.5	23.8
	B-	14.9	19.7	20.1	18.8
	C+	26.5	16.8	20.1	8.9
	C	33.3	11.8	23.3	5.0
	D	3.2	0.0	2.2	1.0

also true for junior colleges. The variation among junior colleges with regard to their entering students' high school grades is shown in Table 3.

Table 3

Average Grades Achieved in High School by Junior College Freshmen
(Percentages)

<u>Average Grade in Secondary School</u>	<u>All Colleges</u>		<u>Range Among Colleges</u>		
	<u>Male</u>	<u>Female</u>	<u>High</u>	<u>Low</u>	<u>Range</u>
A or A+	0.8	1.3	2.2	0.5	1.7
A-	1.1	3.1	3.5	1.0	2.5
B+	4.5	11.7	12.3	5.2	7.1
B	11.8	23.0	20.6	14.3	6.3
B-	18.2	20.9	37.5	12.8	24.7
C+	25.7	22.4	27.8	18.2	9.6
C	34.1	17.0	33.2	7.2	26.0
D	3.7	0.6	3.9	0.0	3.9

Educational Aspirations

One of the fundamental assumptions underlying the selection policies of four-year institutions is that if the student has not achieved satisfactorily in high school, he is not likely to do so in college. However, the expectations held by junior college students for continuing higher education beyond the two-year level are relatively high. Fully 74 percent of the students indicated they hope to obtain at least the baccalaureate degree, and nearly half of these students reported they hope to extend their formal education beyond the bachelor's level. These data are summarized in Table 4.

(Table 4 here)

The data displayed in Table 4 suggest that the educational aspirations of many junior college students may be unrealistically high. Similarly optimistic expectations about the availability of higher educational opportunities have also been found for entering four-year college students (Panos and Astin, 1966), and for graduating college seniors (Davis, 1964). Even

Table 4
Educational Aspirations of Junior College Students
(Percentages)

Item Description	Male	Female	Total
Highest Academic Degree Planned			
None	3.2	5.2	4.1
Associate or equivalent	14.1	30.7	21.6
Bachelor's degree	36.4	37.5	36.9
Master's degree	28.8	19.8	24.8
Ph.D. or Ed.D.	8.5	2.7	5.9
M.D., D.D.S., or D.V.M.	6.0	1.3	3.9
L.L.D. or J.D.	1.2	0.1	0.7
B.D.	0.4	0.3	0.3
Other	1.4	2.4	1.9

if the data displayed in Table 4 are tempered by a recognition of the unreliability of students' reported goals, it is apparent that to the extent the students' intentions for continuing education are built upon real hope, to that extent we may expect many disappointed individuals among junior college graduates. It would seem that the articulation between junior colleges and four-year institutions (Knoell and Medsker, 1965) warrants even more careful and thorough evaluation and planning than has been suggested to date.

The students indicated their probable major field of study on an open-ended item. A list of sixty major field categories was used to code the responses into ten arbitrary classifications. The percentage distribution for probable major field is shown in Table 5.

(Table 5 here)

As might be expected, junior college students are most likely to be classified in the Business category. The relatively large percentage of students in "other" fields reflects the wide variety of special curricula offered by junior colleges. Response alternatives likely to be coded as "Other Fields" in this analysis included such choices as police science, forestry, food and hotel technology, and air conditioning technology. Whereas 13 percent of students entering four-year schools are undecided about their major field of study, only nine percent of junior college freshmen students indicated they were undecided.

Other Background Characteristics

Table 6 displays ten high-level secondary school achievements and the percentage of entering 1965 junior college students who earned recognition for each achievement. These figures reflect the considerable talents of a large number of junior college students. These data are all the more impressive when one considers the drain on the available "pool" of talent

Table 5
Probable Major Field of Study
(Percentages)

Category	Male	Female	Total
Arts and Humanities	10.4	18.9	14.2
Biological Science	6.9	1.5	4.5
Business	18.9	22.9	20.7
Education	3.9	8.2	5.8
Engineering	10.7	0.2	6.0
Physical Science	9.3	3.7	6.8
Social Science	5.6	8.6	6.9
Technical	5.0	4.0	4.5
Other Fields	20.0	22.6	21.1
Undecided	9.3	9.4	9.3

occasioned by the selective admissions policies of most four-year institutions. It would seem that, perhaps, there are indices of talent other than grades.

(Table 6 about here)
(Table 7 about here)

Student Subtypes

The students were asked to compare themselves with other students of their own age on 21 personal traits, using a 5-point self-rating scale. These data were then factored² in order to determine whether there were independent clusters of items which could be used to characterize junior college students in terms of their own self-ratings. Table 7 displays the items with high loadings on each of four factors for females, and three factors for males.

No attempt has been made to label the "factors" displayed in Table 7. Student typologies based on this kind of analysis are necessarily limited for at least two reasons. First, because the "factors" reflect a certain amount of semantic redundancy which is the result of a particular set of items selected. Secondly, because such typologies necessarily oversimplify the nature of the variability which must exist within types. That is, typologies tend to obscure the multidimensional nature of human behavior. Nevertheless, "factors" are useful when they are adopted, not for their ultimate truth, but because they provide an organized framework to facilitate communication.

²The method of analysis used was that of principal components analysis (Hotelling, 1933) followed by varimax rotation (Kaiser, 1958) of those principal components whose latent roots were greater than or equal to one.

Table 6
High School Achievements of Junior College Students
(Percentages)

High School Achievements	Male	Female	Total
Elected President--Student Orgn.	14.3	18.8	16.3
High Rating State Music Contest	4.0	4.4	4.2
State/Regional Speech Contest	4.0	6.9	5.3
Major Part in a Play	10.5	16.9	13.4
Varsity Letter (Sports)	42.3	12.2	28.7
Award in Art Competition	7.1	7.6	7.3
Edited School Paper	4.9	9.9	7.1
Had Original Writing Published	8.4	15.7	11.7
Scholastic Honor Society	6.7	15.3	10.6
National Merit Recognition	2.5	2.9	2.7

Table 7
Trait Self-Rating Factor Loadings^a

Trait ^b	Males			Females			
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3	Factor 4
Academic Ability	58	--	53	--	--	--	54
Athletic Ability	--	48	--	--	--	--	--
Artistic Ability	--	--	--	--	67	--	--
Cheerfulness	--	46	--	53	--	--	--
Drive to Achieve	57	--	--	--	--	--	59
Leadership Ability	58	41	--	51	--	--	--
Mathematical Ability	--	--	79	--	--	78	--
Mechanical Ability	--	--	39	--	--	62	--
Originality	55	--	--	--	60	--	--
Political Liberalism	--	--	--	--	41	--	--
Popularity (General)	--	80	--	71	--	--	--
Popularity (with Opposite Sex)	--	75	--	59	--	--	--
Public Speaking Ability	54	--	--	--	--	--	41
Self-Confidence (Intellectual)	64	--	--	--	--	--	67
Self-Confidence (Social)	--	62	--	59	--	--	--
Writing Ability	52	--	--	--	--	--	44
Percent of Variance:	39.5	10.0	8.5	34.4	10.4	9.3	7.8

^aOnly relatively high factor loadings are shown. Decimals have been omitted.

^bFive items did not yield relatively high loadings on any of the factors shown. These are: Defensiveness; Political Conservatism; Sensitivity to Criticism; Stubbornness; and Understanding of Others.

One such application, which has become increasingly popular in inter-institutional research, is to attempt to classify students into student subtypes and to define college environments in terms of the interactions among student subcultures. Thus, the male Factor 1 and the female Factor 4 seem to reflect an "academic" type among entering junior college students. Similarly, the male Factor 2 and the female Factor 1 suggest a "social" set. One might expect the academic type to emphasize intellectual skills to a somewhat greater degree than the social type, and the social type to be relatively more concerned with the "collegiate" pursuit of campus social activities. The male Factor 3 apparently identifies another "academic" type. However, as the pattern of loadings suggests, this type can probably be characterized as more "inner-directed" than the Factor 1 academic type. The female Factor 2 appears to represent a nonacademic achievement pattern. Furthermore, the loading on the item "political liberalism" suggests a "nonconformist" type. Finally, the female Factor 3 apparently reflects the female counterpart of the male Factor 3.

These junior college student "types," identified from an analysis of their own self-ratings, are similar to student subtypes reported for students in four-year institutions. The male Factor 1 and Factor 2 and female Factor 4 and Factor 1 reflect, respectively, certain of the characteristics of Trow's (1960) "academic culture" and "collegiate culture." It is conceivable that the interactions among various student subtypes on the campus may determine the direction in which a particular college moves, and, to a large extent, define the college "image." Obviously, more and better research in this area is needed. The point to keep in mind is that these data demonstrate the existence of quite different student subtypes attending junior colleges.

Summary

This report has presented some background characteristics and educational aspirations of junior college freshmen. The data presented here have documented the relative gap that exists between two-year and four-year institutions with regard to a variety of student input characteristics and academic achievements. Table 8 displays the differences among institution types for a number of items. The progression from "high" to "low" for universities, four-year colleges, and junior colleges on many of the items shown in Table 8 reflects the relative academic achievement selectivity among such institutions. Nevertheless, the data summarized here have also documented the diversity among junior colleges with regard to student background characteristics. Table 9 shows the variation among junior colleges for a variety of student characteristics. Thus, even though most junior colleges can be characterized as "open-door" institutions, there still exists a diversity of student subtypes among them.

(Table 8 about here)

(Table 9 about here)

In this paper some of the unique functions performed by American junior colleges have been indicated and the need for more thorough research of junior colleges and the students they serve has been suggested by the data. Certain implications of the data have been discussed, but the major purpose of the paper has been to make available a summary report of some characteristics of junior college students. It is our hope that with the recent emphasis on institutional research a much more comprehensive picture of the junior college student and his subsequent development in the junior college will be available.

Table 8

Variation Among Institutions for Selected Items
(Percentages)

Item Description	<u>Junior Colleges</u>		<u>Four Year Colleges</u>		<u>Universities</u>	
	Male	Female	Male	Female	Male	Female
Fathers Education						
College degree	14.3	17.8	19.9	18.9	21.7	23.7
Postgraduate degree	5.3	7.7	12.7	13.7	14.0	16.9
Mothers Education						
College degree	10.1	14.3	20.1	20.3	20.0	22.7
Postgraduate degree	1.7	2.1	3.8	4.2	3.6	4.3
Average Grade in Secondary School						
A or A+	0.8	1.3	4.1	9.5	8.4	10.8
A-	1.1	3.1	7.9	15.5	12.8	18.4
B+	4.5	11.7	15.4	24.9	18.3	24.2
B	11.8	23.0	22.5	24.9	21.1	22.1
Highest Academic Degree Planned						
None	3.2	5.2	0.9	1.4	0.6	1.3
Associate (or equivalent)	14.1	30.7	0.5	0.8	0.2	0.8
Bachelors (B.A., B.S.)	36.4	37.5	26.4	39.3	26.4	49.1
Masters (M.A., M.S.)	28.8	19.8	37.9	47.9	33.9	36.5
Ph.D. or Ed.D.	8.5	2.7	17.3	7.6	21.5	7.4
M.D., D.D.S., or D.V.M.	6.0	1.3	11.1	2.1	11.3	3.0
LL.B. or J.D.	1.2	0.1	4.1	0.4	4.5	0.5
B.D.	0.4	0.3	0.5	0.1	0.2	0.0
Other	1.4	2.4	1.5	0.6	1.5	1.4
Secondary School Achievements						
Elected President Std. Orgnz.	14.3	18.8	32.2	29.3	29.2	28.2
Major Part in a Play	10.5	16.9	24.7	23.0	18.7	22.7
Scholastic Honor Society	6.7	15.3	25.5	43.7	32.7	43.3
National Merit Recognition	2.5	2.9	10.0	11.9	15.2	11.5
Trait Self-Ratings (Percentage of Self-Ratings Above Average)						
Academic Ability	37.8	36.9	57.1	58.9	70.4	69.5
Drive to Achieve	39.7	41.6	55.0	56.6	62.4	62.9
Mathematical Ability	31.8	16.7	41.4	29.6	54.5	32.0
Mechanical Ability	40.7	12.4	30.3	11.6	37.8	14.1
Writing Ability	20.7	25.5	30.3	32.3	36.3	38.0

Table 9
Variation Among Junior Colleges for Selected Items
(Percentages)

Item Description	High	Low	Range
Highest Academic Degree Planned			
Bachelors Degree (B.A., B.S.)	58.5	31.8	26.7
Masters Degree (M.A., M.S.)	29.3	12.8	16.5
Ph.D. or Ed.D.	6.9	0.9	6.0
No Formal Religious Background	5.3	0.0	5.3
No Present Religious Preference	16.2	1.6	14.6
Fathers Education			
College Degree	40.7	12.2	28.5
Postgraduate Degree	33.8	3.9	29.9
Students Reporting That They Frequently or Occasionally			
Gambled with cards or dice	43.1	12.1	31.0
Studied in the library	43.0	14.5	28.5
Attended a ballet performance	46.5	9.9	36.6
Attended a public recital or concert	84.9	42.6	42.3
Drank beer	73.3	38.9	34.4
Cribbed on an examination	37.5	9.3	28.2
Trait Self-Ratings Above Average			
Academic Ability	46.3	24.9	21.4
Drive to Achieve	52.0	35.6	16.4
Originality	44.1	23.7	20.4
Intellectual Self-confidence	33.1	12.3	20.8
Understanding of Others	73.7	51.7	22.0

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American Council on Education

Logan Wilson, President

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